

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A vehicle steering apparatus which uses a steering motor to supply a steering mechanism with steering force corresponding to a steering amount applied to a steering member, comprising:

a reaction force motor for supplying the steering member with steering reaction force;

a vehicle speed sensor for detecting a vehicle running speed;

a current sensor for detecting a motor current of the steering motor; and

a controller for performing operations of:

extracting a component within a predetermined frequency range out of the motor current detected by the current sensor, said predetermined frequency range increasing and decreasing based on the vehicle running speed detected by the vehicle speed sensor and having a lower limit of about 3 Hz and an upper limit of about 9 Hz at high vehicle speed and an upper limit of about 15 Hz at low vehicle speed; and

amplifying the component with an amplification factor which increases as detected vehicle running speed decreases and decreases as detected vehicle running speed increases;

setting a target value of steering reaction force which corresponds to the steering amount;

adding to said target value an additional value of steering reaction force corresponding to the extracted component; and

driving the reaction force motor so as to supply the steering member with steering reaction force corresponding to the ~~extracted component and steering reaction force corresponding to the steering amount~~ sum of the target value and the additional value.

Claims 2-9 (Cancelled).

10. (Original) The vehicle steering apparatus according to Claim 1, wherein the steering member and the steering mechanism are not connected mechanically with each other.

11. (Currently amended) A vehicle steering apparatus which uses a steering motor to supply a steering mechanism with steering force corresponding to a steering amount applied to

steering means, comprising:

a reaction force motor for supplying the steering means with steering reaction force;
vehicle speed sensing means for detecting a vehicle running speed;
current detecting means for detecting a motor current of the steering motor;
extracting means for extracting a component within a predetermined frequency range out of the motor current detected by the current detecting means, said predetermined frequency range increasing and decreasing based on the vehicle running speed detected by the vehicle speed sensor and having a lower limit of about 3 Hz and an upper limit of about 9 Hz at high vehicle speed and an upper limit of about 15 Hz at low vehicle speed; and
amplifying means for amplifying the component with an amplification factor which increases as detected vehicle running speed decreases and decreases as detected vehicle running speed increases;
means for setting a target value of steering reaction force which corresponds to the steering amount;
adding means for adding to said target value an additional value of steering reaction force corresponding to the component extracted by the extracting means, and
reaction force motor driving means for driving the reaction force motor so as to supply the steering means with steering reaction force corresponding to the ~~component extracted by the extracting means and steering reaction force corresponding to the steering amount~~ sum of the target value and the additional value.

Claims 12-19 (Cancelled).

20. (Original) The vehicle steering apparatus according to Claim 11, wherein the steering means and the steering mechanism are not connected mechanically with each other.

Claim 21 (Cancelled).